

### Claims

1. A piston pin bushing, **characterized in that** the overlay surface thereof exhibits the following parameter values at least in the main load area, measured over the bushing cross-section in the axial direction:
  - at a depth of at most 1.800  $\mu\text{m}$ , the bearing ratio amounts to a minimum of 99.0 %;
  - the depth of the roughness core profile amounts to a maximum of 0.30  $\mu\text{m}$ ;
  - the material ratio Mr1 of the roughness core profile amounts to a maximum of 8 %.
2. A piston pin bushing according to claim 1, **characterized in that** the material ratio Mr1 of the roughness core profile amounts to a maximum of 7 %.
3. A piston pin bushing according to claim 1 or claim 2, **characterized in that** the bearing ratio amounts to a minimum of 99.0 % at a depth of at most 0.900  $\mu\text{m}$ .
4. A piston pin bushing according to claim 3, **characterized in that** the depth of the roughness core profile amounts to a maximum of 0.15  $\mu\text{m}$ .

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5. A piston pin bushing according to any one of claims 1 to 4, **characterized in that** the overlay consists of a lead-free copper-based alloy.
- 5 6. A piston pin bushing according to claim 5, **characterized in that** the overlay consists of a copper-aluminum, a copper-zinc or a copper-tin-zinc alloy.
- 10 7. A piston pin bushing according to claims 1 to 6, **characterized in that** the frequency distribution of the roughness profile of the overlay topography exhibits a half width of at most 0.20  $\mu\text{m}$ .
- 15 8. A piston pin bushing according to claims 1 to 7, **characterized in that** the frequency distribution of the roughness profile of the overlay topography exhibits a half width of at most 0.10  $\mu\text{m}$ .
- 20 9. A method of producing a piston pin bushing according to any one of claims 1 to 8, **characterized in that** the overlay of the piston pin bushing is finished by a surface treatment method.
- 25 10. A method according to claim 9, **characterized in that** the overlay of the piston pin bushing is finished by plateau honing.